

Remarks

In the specification, paragraph 0060 was amended to further describe in words what is shown in Figure 6 (and 7). No new matter is added, because it is fully supported by the original figures and description.

Claims 1 to 28 are present in this application. Claims 1, 11, 12, and 18 were amended, and claims 23-28 were added herein. No new matter was added.

Claims 15-17 were allowed by the examiner. Applicants are grateful for the allowance of those claims; however, Applicants believe that all the claims are in condition for allowance. Claims 1-14, and 18-22 were rejected under 102 and 103. The rejections are traversed and reconsideration of claims 1-14 and 18-22 and new claims 23-28 is respectfully requested.

Claims 1, 4-7 and 11-13 were rejected under 102(b) over Sevic ('337). To be a proper 102 reference, the reference must disclose all the elements of the claims. Sevic does not disclose a plurality of oxygen generators. Sevic discloses at col.3, lines 53-65:

"The oxygen...may be either produced on site when the breeder's requirements are such that they justify the installation of a small factory on site, such as a factory using adsorption techniques (VSA and PSA, that is to say Vacuum Switch Adsorption and Pressure Swing Adsorption, respectively), this on-site factory producing a gas containing more than about 90% by vol. Of oxygen. Preferably, the oxygen is however stored on site in a reservoir in the form of a liquid oxygen and is generally delivered by tanker to the breeder's site." (Emphasis added.)

Sevic discloses a single factory, or a reservoir of oxygen. Sevic does not disclose a plurality of oxygen generators as claimed by Applicants, and therefore is an improper 102 reference. It is therefore respectfully requested that this 102 rejection be withdrawn.

Claims 1, 2, 4, 5 and 7 were rejected under 102 as being anticipated by Shaar. The Office Action states that Shaar discloses "an oxygen generator/ozone source (pump system 2 in use with the teaching of col. 4, lines 40-47) in fluid communication with the oxygen injector 5, 6, 6A to increase the dissolved oxygen..."

Applicants respectfully disagree. Shaar does not disclose an oxygen generator/ozone source. The words "generator" and "ozone" are not even mentioned in Shaar. Shaar states at col.4, lines 45-46 and 57-60 that air or other oxygen containing gas may be injected into a pump used for water circulation, but Shaar does not disclose the

source of that oxygen containing gas. There is no disclosure of a plurality of oxygen generators as claimed by Applicants; therefore, Shaar is an improper 102 reference. It is therefore respectfully requested that the 102 rejection over Shaar be withdrawn.

Claims 18, 19 and 22 were rejected under 102 as being anticipated by Plocek. Claim 18 was amended herein to further specify that the one or more vortexes move parallel to the top surface of the aqueous medium in the containment vessel. The top plan views of the containment vessels shown in Figures 6 and 7 show that the circular vortexes move parallel to the surface of the aqueous medium, and therefore, the amendment to the specification at paragraph [0060] and to claim 18 is fully supported by the specification. Plocek discloses an aeration device that injects air at the bottom of the tank directed up to the top of the tank to create the circular movement of the water up to the surface, and back down on the outsides, meaning that the circular movement is perpendicular to the top surface of the tank. Plocek does that to keep the shrimp, and brine suspended and prevent them from piling up on the bottom of the tank. Plocek does not disclose a containment vessel having at least one circular vortex that is substantially parallel to said top surface of the aqueous medium in said containment vessel. Therefore, Plocek is not a proper 102 reference and it is respectfully requested that the 102 rejection of claims 18, 19 and 22 be withdrawn.

Claim 3 was rejected under 103 as being unpatentable over Sevic in view of Woltman, because Woltman teaches an aquafarming system having a medicine source 10 in communication with oxygen injectors/aspirators, col. 2, lines 25-28. The Office Action states that it would be obvious to use a medicine source of Woltman in the system of Sevic.

Applicants respectfully disagree. Even if that were true, (I'm not admitting it is), Sevic fails to make claim 3 obvious for the reason it fails to anticipate the claims as discussed above. Sevic teaches a factory or a reservoir of oxygen. Sevic fails to teach or suggest or provide any motivation for the use a plurality of oxygen generators in a system comprising a plurality of containment vessels for aquafarming. Sevic's preferred embodiment is to provide oxygen via a reservoir, which teaches away from Applicants' plurality of generators. Applicants realized the drawbacks of using a single source of oxygen enriched gas, e.g. a reservoir, as discussed in paragraph [0012] of Applicants' specification and invented a new system which Sevic in view of Woltman does not make obvious. It is therefore respectfully requested that the 103 rejection of claim 3 be withdrawn.

Claims 8-10 were rejected under 103 as being unpatentable over Sevic in view of Kajisono. The Office Action states that Sevic does not disclose an oxygen generator being mounted on wheels or a floatable support, and that Kajisono teaches a water purifier apparatus 40 mounted on a floatable support 11. The Office Action states that to make the oxygen generator of Sevic portable as shown by Kajisono would have been obvious to one skilled in the art. Also the Office Action states that to make an old device portable or movable without producing any new or unexpected results involves only routine skill in the art, and to make an old device portable or movable without unexpected results involves only routine skill. In re Lindberg, 93 USPQ 23 (CCPA 1952).

Applicants respectfully disagree. Sevic teaches a factory for producing oxygen or preferably a reservoir of liquid oxygen delivered to an aquafarming site via a tanker. For the reasons stated above Sevic fails to teach or suggest a system comprising a plurality of oxygen generators. Sevic actually teaches away from a system comprising a plurality of oxygen generators. Further Kajisono does not make it obvious to mount an oxygen generator on wheels or a floatable support. Kajisono does not even mention the injection of any gas except air into water. Kajisono, like Sevic teach or suggest nothing about a plurality of oxygen generators. Therefore, Sevic in view of Kajisono fails to teach or suggest Applicants invention comprising a plurality of oxygen generators.

Claim 3 was was rejected under 103 as being unpatentable over Shaar in view of Woltman. The Office Action states that Shaar does not disclose the use of a medicine source in communication with oxygen injectors, and Woltman teaches an aquafarming system having a medicine source in communication with oxygen injectors/aspirators, col.2, lines 25-28, and that to use the medicine source of Woltman in the system of Shaar would have been obvious.

Applicants respectfully disagree. Neither Shaar nor Woltman teach nor suggest the use of a plurality of oxygen generators in a system for aquafarming; therefore, Shaar in view of Woltman fails to teach nor suggest Applicants' invention of claim 3.

Claims 6 and 11-14 were rejected under 103 as being unpatentable over Shaar in view of Sevic. The Office Action states:

“Shaar does not teach the use of the oxygen generator being a vacuum swing absorption type, a specific dissolved oxygen content and the use of sensors and more oxygen at night than the day. Sevic teaches that both the vacuum swing absorption generator and pressure swing generator are known and the use of either generator to provide oxygen would be beneficial, see col. 3, lines 54-60. With respect to claims 6 and 11, to use the vacuum swing absorption generator of Sevic with the system of Shaar would have been obvious to one skilled in the art in order to achieve a greater percentage by volume of oxygen. With respect to claims 12 and 13, to use the timer control and sensors of Sevic with the system of Shaar would have been obvious to one skilled in the art in order to control the generators output to activate them at a time when it is most efficient and necessary, such as lower oxygen levels observed at night. With respect to claim 14, to allow the biomass of the shrimp to be at least 0.5 kg/m² or greater in the system of Shaar as taught by Sevic, see col.1, lines 58-60 would have been obvious to one skilled in the art to have maintained the biomass density of the marine animals with the containment vessel at any given density which would result in the maximum operability of the containment vessel and still ensure the health of the marine animals.”

Applicants respectfully disagree. Whether or not the above is true, and I make no admission that it is, Shaar in view of Sevic does not teach nor suggest nor provide any motivation for a system for aquafarming comprising a plurality of oxygen generators. Sevic does disclose a factory using adsorption techniques, i.e., VSA and PSA. Sevic does not teach nor suggest a system for aquafarming comprising a plurality of oxygen generators. Shaar does not teach how an oxygen containing gas other than air is to be supplied; therefore, the combination of Shaar and Sevic fails to make Applicants' invention obvious. It is therefore respectfully requested that the 103 rejection of Applicants' invention be withdrawn.

Claims 8-10 were rejected under 103 as being unpatentable over Shaar in view of Kajisono. The Office Action states that Shaar does not disclose an oxygen generator being mounted on wheels or a floatable support, and that Kajisono teaches a water purifier apparatus 40 mounted on a floatable support 11. The Office Action states that to make the oxygen generator of Shaar portable as shown by Kajisano would have been obvious to one skilled in the art. Also the Office Action states that to make an old device portable or

movable without producing any new or unexpected results involves only routine skill in the art. In re Lindberg, 93 USPQ 23 (CCPA 1952).

Applicants respectfully disagree. Shaar does not teach an oxygen generator. Shaar discloses that air or an other oxygen containing gas can be supplied to the water, but Shaar never describes the source of the other oxygen containing gas; therefore, Shaar fails to teach or suggest Applicants' invention comprising a plurality of oxygen generators. Kajisono adds nothing to teach or suggest using a plurality of oxygen generators. Kajisono injects air into the water via a floating purifier. Further, the combination of Shaar and Kajisono would not even suggest using the floating water purifier of Kajisono in the system of Shaar, because Shaar teaches a cover on a pond, that would make it difficult or impossible to use a floating purifier on the pond. Therefore, it is respectfully requested that the 103 rejection of claims 8-10 over Shaar in view of Kajisono be withdrawn.

Claim 14 is rejected under 103 as being unpatentable over Sevic. With respect to claim 14, to allow the biomass of the shrimp to be at least 0.5 kg/m² or greater in the system of Sevic, col. 1, lines 58-60, would have been obvious to one skilled in the art.

Applicants respectfully disagree. The biomass is a measure of mass of shrimp/area of containment vessel. At col. 1, lines 58-60, Sevic discloses the amount of oxygen consumed per ton of fish. Therefore, Sevic does not teach or suggest Applicants' claimed biomass. It is respectfully requested that this 103 rejection be withdrawn.

Claims 20 and 21 were rejected under 103 as being unpatentable over Plocek in view of Ido. The Office Action states:

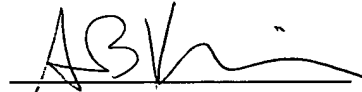
"Plocek does not disclose the exact flow rate of the aqueous medium. Ido teaches the use of the pumps causing a current flow of 5 to 20 cm/sec, see col.14, lines 1-4. With respect to claims 20 and 21 to move the aqueous medium at a flow rate of between 4 and 20 cm/sec as taught by Ido in the system of Plocek would have been obvious to one skilled in the art in order to provide enough aqueous medium movement to be closer to the conditions of the sea and allow for full aeration, the drift of the animals and to move the waste or sludge from the general living area to the bottom."

Applicants respectfully disagree. Claim 18 was amended to specify that the at least one circular vortex is parallel to the top surface of the aqueous medium. Plocek teaches the opposite. Plocek teaches a vortex that tries to keep everything in suspension by pumping air

(and water) up to the top surface of the water in the tank. In this manner, Plocek keeps the shrimp and brine, and waste in suspension. Plocek even slopes the sides of the tank toward the air inlet to prevent any dead spots or areas without current, col. 2, lines 32-35. Ido does disclose movement of water between 5 to 20 cm/sec; however, the combination of Plocek and Ido, at best, would only teach a circular motion of water perpendicular to the surface of a tank at the rates that Plocek specified, keeping the marine animals and sludge in suspension. Therefore, Plocek in view of Ido does not teach or suggest Applicants' claimed invention. It is therefore respectfully requested that the 103 rejection over Plocek in view of Ido be withdrawn.

Applicants believe that all the rejections should be withdrawn and that all the claims are in condition for allowance. Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'ABV' followed by a stylized flourish.

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